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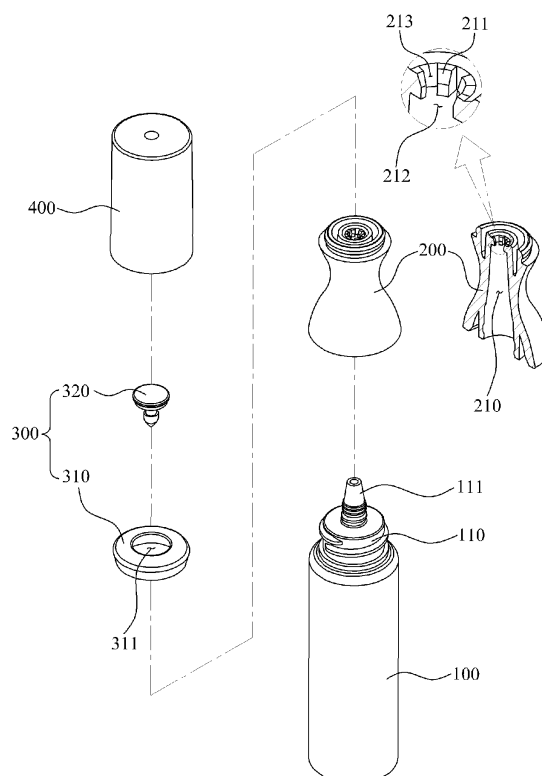
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(54) **TUBULAR CONTAINER HAVING APPLICATOR**

(57) The present invention disclosed herein relates to a tubular container having an applicator. According to the tubular container having an applicator, an applicator made of metal material that comes into contact with the

skin is disposed at an upper portion of the tubular container, such that it is possible to transfer warmth and coldness to the skin when contents are applied, thereby promoting the metabolism and elasticity of the skin.

[Fig. 1]



Description

BACKGROUND OF THE INVENTION

[0001] The present invention disclosed herein relates to a tubular container having an applicator, wherein a tubular container having an applicator comprises an applicator made of metal material that comes into contact with the skin is disposed at an upper portion of the tubular container, such that it is possible to transfer warmth and coldness to the skin when contents are applied, thereby promoting the metabolism and elasticity of the skin.

[0002] Generally, a tubular container having an applicator comprises a tube body receiving contents therein; a tube neck which is coupled to an upper portion of the tube body and supports the tube body, further comprising a discharging part to discharge content stored in the tube body; and an over cap which is detachably coupled to the tube neck and opens and closes the discharging part.

[0003] Tube containers as the above discharge contents through a discharging part when the tube body is pressurized, and as shown in FIG. 1 of the registered patent no. 10-1057333, have an applicator, like a brush (140) which absorbs and discharges contents such that the contents can be applied easily, coupled to an upper portion structure (120).

[0004] Recently, as the interest in skincare increases, since it is hard to get enough amount of contents absorbed in the skin and contentable skincare effect by a simple absorption, there have been tried various methods to transfer warmth or coldness to the skin so as to promote the metabolism and improve elasticity of the skin. However, the registered patent above has a structure wherein contents are simply absorbed and discharged through a brush (140), and thus it is not possible to transfer warmth or coldness to the skin.

[0005] To solve the problems as the above, cold or hot mask packs are introduced such that warmth or coldness can be transferred to the skin. However, these devices are very complicated in their structures and takes a high manufacturing cost, and therefore, are not practically being used much.

[0006] Accordingly, there has increased a need for a cosmetic container having a simple structure which can transfer warmth or coldness to skin when applying contents to the skin.

SUMMARY OF THE INVENTION

[0007] The present invention is devised to solve the said problems above, and its goal is to provide a tubular container having an applicator, wherein an applicator is disposed at an upper portion of the tubular container and made of metal material that comes into contact with the skin, such that it is possible to transfer warmth and coldness to the skin when contents are applied, thereby promoting the metabolism and elasticity of the skin.

[0008] Furthermore, the tubular container having an

applicator has a structure wherein a first applicator and a second application, which are provided separately, close a content moving passage when in a normal state, and open the content moving hole as the second applicator ascends by a pressure of the contents when the contents are discharged by pressurizing the tube body. Therefore, it is possible that the tubular container having an applicator can prevent air from being flowing into the inside of the tube body.

[0009] To solve such problems described in the above, it is featured that a tubular container having an applicator according to the present invention comprises: a tube body receiving contents therein and coupled with a tube neck which has a discharging part at an upper portion thereof such that contents can be discharged into; a support body coupled at an upper portion of the tube neck and comprising a content moving tube which forms a passage such that contents discharged through the discharging part can flow to an upper portion thereof; and an applicator part including a first applicator which is coupled to an upper portion of the support body and applies contents onto a user's skin in a contact with the skin and further forms a hollow, and a second applicator which is inserted into the hollow of the first applicator, and ascends with the pressure of contents by pressurization of the tube body and then descends by depressurization of the tube body.

[0010] Furthermore, it is featured that a tubular container having an applicator according to the present invention comprises: a tube body receiving contents therein and coupled with a tube neck which has a discharging part at an upper portion thereof such that contents can be discharged; a support body coupled at an upper portion of the tube neck, comprising a content moving tube which forms a passage such that contents discharged through the discharging part can flow to an upper portion thereof; an applicator part including a first applicator which is coupled to an upper portion of the support body and applies contents onto a user's skin in a contact with the skin, forming a hollow, and a second applicator which is inserted into the hollow of the first applicator, ascending with the pressure of contents by pressurization of the tube body and descending by depressurization of the tube body; and an applicator coupling body coupled in a state the applicator part is slanted by a predetermined angle to an upper portion of the support body between the support body and the applicator part.

[0011] Furthermore, it is featured to further include an over cap which is coupled to the tube neck and comprises a pressurizing protrusion which pressurizes an upper end of the second applicator at an inner upper side thereof.

[0012] Furthermore, it is featured that the first applicator and the second applicators are made of metal material.

[0013] Furthermore, it is featured that a multitude of supporting protrusions are provided with a predetermined distance apart at an upper portion of the content moving passage, encasing an inner circumferential sur-

face of the content moving passage such that the second applicator can ascend and descend, wherein the multitude of supporting protrusions comprises: a coupling hole at a center of the content moving passage such that the second applicator can be coupled; and a content moving hole where content can move through a space separated with a predetermined distance apart.

[0014] Furthermore, it is featured that the second applicator includes: an opening and closing plate which is secured at an upper end of the content moving passage and closes the content moving passage, and then is ascended by the pressure of the contents and opens the content moving passage; and a supporting bar which is extended from the opening and closing plate and coupled to the coupling hole in a state of being capable of ascending and descending, and supports the opening and closing plate such that the second applicator can be prevented from being separated from the content moving passage when the second applicator ascends.

[0015] Furthermore, it is featured that at a center portion of the applicator coupling body is provided a communicating part which is communicated with the content moving passage, and at the communicating part are provided a multitude of supporting protrusions with a predetermined distance apart, encasing an inner circumferential surface such that the second applicator can be coupled in a state of being capable of ascending and descending, wherein the multitude of supporting protrusions comprises at a center portion of the communicating part a coupling hole where the second applicator is coupled and a content moving hole where content can move through a space separated with a predetermined distance apart.

[0016] Furthermore, it is featured that the supporting bar comprises a protrusion which is contacted and limits the ascent of the second applicator when the contents are discharged.

[0017] According to the present invention as described above, an applicator made of metal material is provided at an upper portion of the tubular container and contacted to skin, such that it is possible to transfer warmth and coldness to the skin when contents are applied, thereby promoting the metabolism and elasticity of the skin.

[0018] Furthermore, the first applicator and the second applicator provided separately close a content moving passage when in a normal state, and open the content moving hole as the second applicator ascends by a pressure of the contents when the contents are discharged by pressurizing the tube body. Therefore, it is possible that the tubular container having an applicator can prevent air from being flowing into the inside of the tube body.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019]

FIG. 1 is an exploded perspective view illustrating a configuration of a tubular container having an appli-

cator according to an exemplary embodiment of the present invention.

FIG. 2 is an assembled perspective view illustrating a configuration of a tubular container having an applicator according to an exemplary embodiment of the present invention.

FIG. 3 is a cross-sectional view illustrating a configuration of a tubular container having an applicator according to an exemplary embodiment of the present invention.

FIG. 4 is a view illustrating an operational state of contents being discharged of a tubular container having an applicator according to an exemplary embodiment of the present invention.

FIG. 5 is an exploded perspective view illustrating a configuration of a tubular container having an applicator according to another exemplary embodiment of the present invention.

FIG. 6 is an assembled perspective view illustrating a configuration of a tubular container having an applicator according to another exemplary embodiment of the present invention.

FIG. 7 is a cross-sectional view illustrating a configuration of a tubular container having an applicator according to another exemplary embodiment of the present invention.

FIG. 8 is a view illustrating an operational state of contents being discharged of a tubular container having an applicator according to another exemplary embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0020] Hereinafter, exemplary embodiments of the present invention will be described in detail with reference to the accompanying drawings. The same reference numerals provided in the drawings indicate the same members.

[0021] FIG. 1 is an exploded perspective view illustrating a configuration of a tubular container having an applicator according to an exemplary embodiment of the present invention. FIG. 2 is an assembled perspective view illustrating a configuration of a tubular container having an applicator according to an exemplary embodiment of the present invention. FIG. 3 is a cross-sectional view illustrating a configuration of a tubular container having an applicator according to an exemplary embodiment of the present invention.

[0022] Referring to FIGS. 1 to 3, a tubular container having an applicator according to an exemplary embodiment of the present invention may include a tube body 100, a support body 200, an applicator part 300, an applicator 400, and an over cap 400.

[0023] The tube body 100 receiving contents is coupled with a tube neck 110 at an upper portion thereof such that the tube neck 110 can support the tube body 100 and a support body 200 to be described later can be

coupled, wherein the tube neck has a discharging part 111 at a center thereof such that contents received in the tube body 100 can be discharged.

[0024] The support body 200 encasing discharging part 111 and coupled to an upper portion of the tube neck 110 supports an applicator 300, and comprises a content moving passage 210 therein which the contents discharged through the discharging part 111 can move through.

[0025] The present invention has a feature in that a multitude of supporting protrusions 211 are provided with a predetermined distance apart at an upper portion of the content moving passage 210, encasing an inner circumferential surface of the content moving passage 210, such that a second applicator 320 to be described later can be coupled in a state of being capable of ascending and descending. The multitude of supporting protrusions 211 forms a coupling hole 212 at a center of the content moving passage 210 such that a supporting bar 322 of the second applicator 320 can be coupled; and a content moving hole 213 such that contents can move through a space separately formed.

[0026] The applicator part 300, which is contacted to user's skin and applies contents onto the user's skin, is coupled encasing an upper portion of the support body 200, further comprising a first applicator 310 which forms a hollow 311 such that a second applicator 320 can form a space to ascend and descend, and a second applicator 320 which is coupled to the hollow 311 in a state of being capable of ascending and descending.

[0027] In the present invention, the second applicator 320 comprises an opening and closing plate 321 which opens and closes the content moving passage 210 and a supporting bar 322 which supports the opening and closing plate 321, wherein the opening and closing plate 321 secured to an upper end of the content moving passage 210 closes the content moving passage 210 when in a normal state, and opens the content moving passage 210 as ascending by a pressure of the contents when a user pressurizes the content body 100, thereby discharging contents.

[0028] Furthermore, the supporting bar 322 extended from a center portion of a lower end of the opening and closing plate 321 and supporting the opening and closing plate 321 is composed of a pre-determined length which penetrates through the coupling hole 212. It is preferable that at a lower portion of the supporting bar 322 is provided a protrusion 323 which is contacted to a lower end of the supporting protrusion 211 when the second applicator 320 ascends, so as to prevent the second applicator 320 from ascending upwards by the pressure of the contents when discharged and thereby from being separated from the content moving passage 210.

[0029] Meanwhile, in the present invention, the applicator part 300 is featured to have the first applicator 310 and the second applicator 320 made of metal material. Due to the property of metal, when contents are applied on the skin, it is possible to transfer warmth and coldness

to the skin when contents are applied, thereby promoting the metabolism and elasticity of the skin and achieving good skincare effect.

[0030] The over cap 400 encasing the applicator part 400 and coupled to the tube neck 110 comprises a pressurizing protrusion 410 which is protrusively formed at an upper inner side of the over cap 400 and pressurizes an upper end of the second applicator 320.

[0031] The pressurizing protrusion 410 pressurizes an upper end of the second applicator 320 in a state that the over cap 400 is coupled to the tube neck 110, and prevents the second applicator 320 from ascending. At the same time, the pressurizing protrusion 410 causes the opening and closing plate 321 to close the content moving passage 210, and to block air from flowing into the inside of the tube body 100 when in a normal state, preventing the contents received in the tube body 100 from being spoiled.

[0032] Hereinafter, referring FIG. 4, an operational state of contents being discharged of a tubular container having an applicator according to an exemplary embodiment of the present invention will be described. FIG. 4 is a view illustrating an operational state of contents being discharged of a tubular container having an applicator is discharged according to an exemplary embodiment of the present invention.

[0033] Referring FIG. 4, in a tubular container having an applicator according to an exemplary embodiment of the present invention, when a user pressurizes a tube body 100 after separating the over cap 400, the contents received in the tube body 100 can be discharged through a discharging part 111. At this time, the contents discharged through the discharging part 111 moves to the content moving hole 213 through the content moving passage 210 of the support body 200 and pressurizes the opening and closing plate 321 of the second applicator 320. Due to this, the second applicator 320 ascends by the pressure of the contents.

[0034] As the above, when the second applicator 320 ascends, the content moving passage 210 opens, and thereby the contents can be discharged to an upper end of the applicator part 300 through a space formed by the first applicator 310 and the second applicator 320, namely a hollow 311. Therefore, it is possible to apply the discharged contents onto the skin through the applicator part 300.

[0035] Hereinafter, with reference to FIGS. 5 and 8, another exemplary embodiment of the present invention will be described in detail.

[0036] Hereinafter, referring FIGS. 5 and 7, a tubular container having an applicator according to another exemplary embodiment of the present invention includes a tube body 500, a support body 600, an applicator part 700, an applicator coupling body 800, and an over cap 900.

[0037] The tube body 100 receiving contents is coupled with a tube neck 510 at an upper portion of the tube body 500, so as to support the tube body 500 and be

coupled with a support body 600 to be described later, wherein at a center portion of the tube neck 510 is formed a discharging part 511 where contents received in the tube body 500 are discharged.

[0038] At a lower portion of an outer circumferential surface of the discharging part 511 is provided a rotation preventing protrusion 512 which guides a combining direction of the support body 600 and prevents a rotation thereof at the same time at a lower portion of an outer circumferential surface of the discharging part 511.

[0039] The support body 600 coupled encasing the discharging part 511 at an upper portion of the tube neck 510 comprises a content moving passage 610 at the inside thereof such that the contents discharged through the discharging part 511 can move to an upper portion thereof.

[0040] At a lower end of the support body 600 is provided a coupling groove 620 which is coupled with the rotation preventing protrusion 512 so as to prevent the rotation of the support body 600.

[0041] The applicator part 700, which is contacted to user's skin and applies contents onto the user's skin, comprises a first applicator 710 which is coupled to an applicator coupling body 800 at an upper portion of the support body 600 and forms a hollow 711 such that a second applicator 720 can form a space to ascend and descend, and a second applicator 720 which is coupled to the hollow 711 in a state of being capable of ascending and descending.

[0042] In the present invention, the second applicator 720 comprises an opening and closing plate 721 which opens and closes a communicating part 810 to be described later and a supporting bar 722 which supports the opening and closing plate 721, wherein the opening and closing plate 721 secured to an upper end of the communicating part 810 closes the communicating part 810 when in a normal state, and then opens the communicating part 810 as ascending by a pressure of the contents when a user pressurizes the content body 100, thereby discharging contents.

[0043] Furthermore, the supporting bar 722 extended from a center portion of a lower end of the opening and closing plate 721 and supporting the opening and closing plate 721 is composed of a predetermined length which penetrates through the coupling hole 812. It is preferable that at a lower portion of the supporting bar 722 is provided a protrusion 723 which is contacted to a lower end of the supporting protrusion 811 when the second applicator 720 ascends, so as to prevent the second applicator 720 from ascending upwards by the pressure of the contents when discharged and thereby from being separated from the communicating part 810.

[0044] Meanwhile, in the present invention, the applicator part 700 is featured to have the first applicator 710 and the second applicator 720 made of metal material. Due to the property of metal, when contents are applied on the skin, it is possible to transfer warmth and coldness to the skin when contents are applied, thereby promoting

the metabolism and elasticity of the skin and achieving good skincare effect.

[0045] The applicator coupling body 800 is coupled to an upper portion of the support body 600 between the support body 600 and the applicator part 700 and support the applicator part 700. In the present invention, the applicator coupling body 800 is coupled with a predetermined angle slanted to an upper portion of the support body 600 and supports the applicator part 700 in a state of the applicator part 700 being slanted, thereby providing a user convenience.

[0046] Meanwhile, it is featured that at a center portion of the applicator coupling body 800 is provided a communicating part 810 which is communicated with the content moving passage 610, and at the communicating part 810 are provided a multitude of supporting protrusions 811 with a predetermined distance apart, encasing an inner circumferential surface such that the second applicator 720 can be coupled in a state of being capable of ascending and descending.

[0047] The multitude of supporting protrusions 811 comprises a coupling hole 812 at a center portion of the communicating part 810 such that the supporting bar 722 of the second applicator 720 is coupled, and a content moving hole 813 such that contents can move through a separated space.

[0048] The over cap 900 encasing the applicator part 700 and coupled to the tube neck 510 comprises a pressurizing protrusion 910 which is protrusively formed at an upper inner side thereof and pressurizes an upper end of the second applicator 720.

[0049] The pressurizing protrusion 910 pressurizing an upper end of the second applicator 720 in a state that the over cap 900 is coupled to the tube neck 510 prevents the second applicator 720 from ascending, and at the same time leads the opening and closing plate 721 to close the communication part 810 and to block air from flowing into the inside of the tube body 500 when in a normal state, therefore preventing the contents received in the tube body 500 from being spoiled.

[0050] Hereinafter, with reference to FIG. 8, an operational state of contents being discharged of a tubular container having an applicator according to another exemplary embodiment of the present invention.

[0051] Referring FIG. 8, in a tubular container having an applicator according to an exemplary embodiment of the present invention, when a user pressurizes a tube body 500 after separating the over cap 900, the contents received in the tube body 500 can be discharged through a discharging part 511. At this time, the contents discharged through the discharging part 511 move to the content moving hole 813 through the communicating part 810 by way of the content moving passage 610 of the support body 600 and pressurize the opening and closing plate 721 of the second applicator 720. Due to this, the second applicator 720 ascends by the pressure of the contents.

[0052] As the above, when the second applicator 720

ascends, the communicating part 810 opens, and thus, the contents can be discharged to an upper end of the applicator part 700 through a space formed by the first applicator 710 and the second applicator 720, namely a hollow 711. Therefore, it is possible to apply the discharged contents onto the skin through the applicator part 700.

[0053] As described above, optimal embodiments have been disclosed in the drawings and the specification. Although specific terms have been used herein, these are only intended to describe the present invention and are not intended to limit the meanings of the terms or to restrict the scope of the present invention as disclosed in the accompanying claims. Therefore, those skilled in the art will appreciate that various modifications and other equivalent embodiments are possible from the above embodiments. Therefore, the scope of the present invention should be defined by the technical spirit of the accompanying claims.

Claims

1. A tubular container having an applicator comprising:

a tube body (100) receiving contents, wherein at an upper portion thereof is provided a tube neck (110) having a discharging part (111) where contents are discharged;
a support body (200) coupled to an upper portion of the tube neck (110), and forming a content moving passage (210) such that contents discharged through the discharging part (111) move to an upper portion thereof; and
an applicator part (300) coupled to an upper portion of the support body (200) and applying contents in a contact with user's skin, further comprising: a first applicator (310) which comprises a hollow (311); and a second applicator (320) which is inserted to the hollow (311), ascending by the pressure of contents when pressurizing the tube body (100) and then descending when depressurizing the tube body.

2. A tubular container having an applicator comprising:

a tube body (500) receiving contents, wherein at an upper portion thereof is provided a tube neck (510) having a discharging part (511) where contents are discharged;
a support body (600) coupled to an upper portion of the tube neck (510), and forming a content moving passage (610) such that contents discharged through the discharging part (511) move to an upper portion thereof;
an applicator part (700) coupled to an upper portion of the support body (600) and applying contents in a contact with user's skin, further com-

prising: a first applicator (710) which comprises a hollow (711); and a second applicator (720) which is inserted to the hollow (711), ascending by the pressure of contents when pressurizing the tube body (500) and then descending when depressurizing the tube body (500); and
an applicator coupling body (800) coupled in a state the applicator part (700) is slanted by a predetermined angle to an upper portion of the support body (600) between the support body (600) and the applicator part (700), and supporting the applicator part (700) with the predetermined angle slanted.

3. The tubular container having an applicator of claim 1 or 2, further comprising an over cap (400, 900) coupled to the tube neck (110, 510), encasing the applicator part (300, 700), wherein the over cap (400, 900) comprises a pressurizing protrusion (410, 910) which pressurizes an upper end of the second applicator (320, 720) at an inner side thereof.

4. The tubular container having an applicator of claim 1 or 2, wherein the first applicator (310, 710) and the second applicator (320, 720) are made of metal material.

5. The tubular container having an applicator of claim 1, comprising
a multitude of supporting protrusions (211) disposed with a predetermined distance apart and encasing an inner circumferential surface of the content moving passage (210) at an upper portion of the content moving passage (210) such that the second applicator (320) can ascend and descend, wherein the multitude of supporting protrusions (211) comprises a coupling hole (212) at a center portion of the content moving passage (210) such that the second applicator (320) can be coupled and a content moving hole (213) such that contents can move through a separated space.

6. The tubular container having an applicator of claim 5, wherein the second applicator (320) comprises:

an opening and closing plate (321) secured at an upper end of the content moving passage (210) and closing the content moving passage (210), and then ascending by a pressure of contents and opening the content moving passage (210); and
a supporting bar (322) extending to a lower portion from the opening and closing plate (321) and coupled to a coupling hole (212) in a state of being capable of ascending and descending, wherein the supporting bar (322) supports the opening and closing plate (321) so as to prevent the second applicator (320) from being separat-

ed from the content moving passage (210) when the second applicator (320) ascends by the pressure of contents.

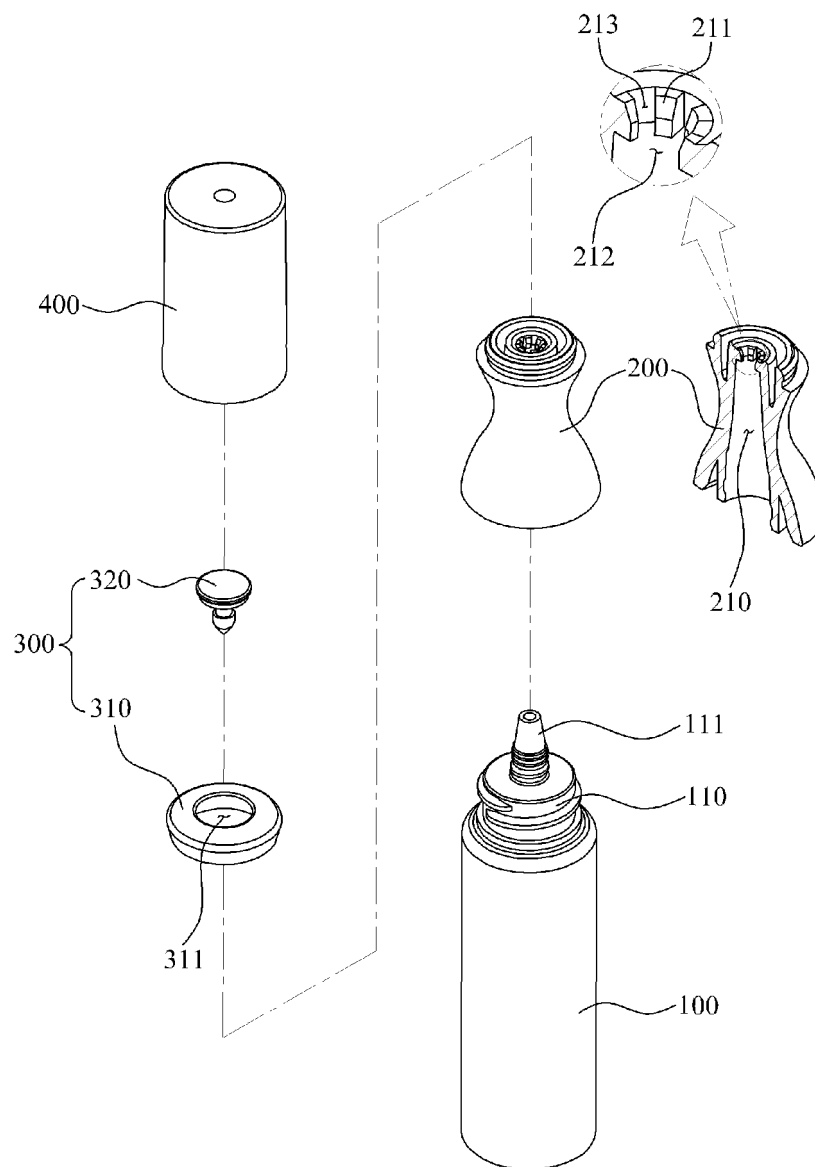
support body (600).

7. The tubular container having an applicator of claim 2, comprising a communicating part (810) communicated with the content moving passage (610) at a center portion of the applicator coupling body (800), wherein the communication part (810) has a multitude of supporting protrusions (811) formed with a predetermined distance apart at the communication part (810), encasing an inner circumferential surface of the communication part (810) such that the second applicator (720) is coupled wherein the multitude of supporting protrusions (811) comprises: a coupling hole (620) at a center portion of the communicating part (810) such that the second applicator (720) can be coupled; and a content moving hole (813) such that contents can move through a separated space.
8. The tubular container having an applicator of claim 7, wherein the second applicator (720) comprises:

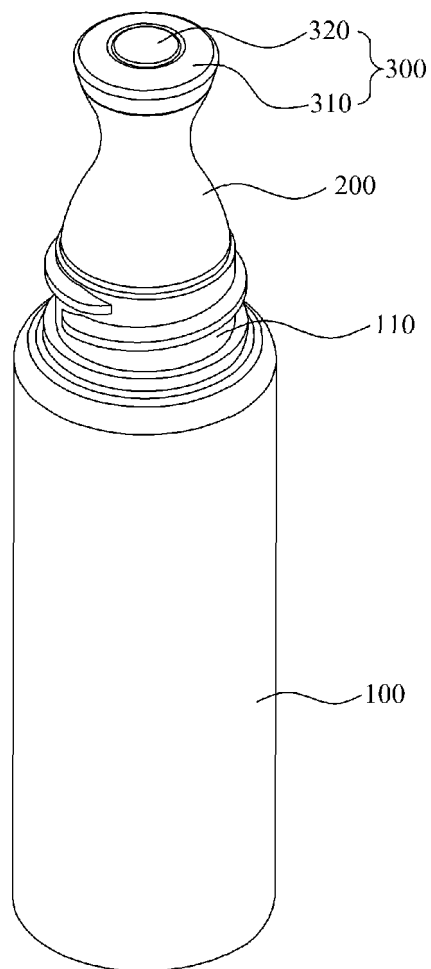
an opening and closing plate (721), which is secured at an upper end of the communicating part (810) and closes the communicating part (810), ascends by a pressure of contents and thereby opens the communicating part (810); and
a supporting bar (722) extending from the opening and closing plate (721) to a lower portion and coupled to a coupling hole (812) in a state of being capable of ascending and descending, wherein the supporting bar (722) supports the opening and closing plate (721) so as to prevent the second applicator (720) from being separated from the communicating part (810) when the second applicator (720) ascends by the pressure of contents.
9. The tubular container having an applicator of claim 6 or 8, wherein the supporting bar (322, 722) comprises a protrusion (323, 723) which limits the ascent of the second applicator (320, 720) by being contacted to a lower end of the multitude of supporting protrusions (211, 811) when the contents are discharged.
10. The tubular container having an applicator of claim 2, comprising:

a rotation preventing protrusion (512) which guides a coupling direction of the support body (600) and simultaneously prevents the rotation of the support body (600) at a lower portion of an outer circumferential surface; and a coupling groove (620) which is coupled with the rotation preventing protrusion (512) at a lower end of the

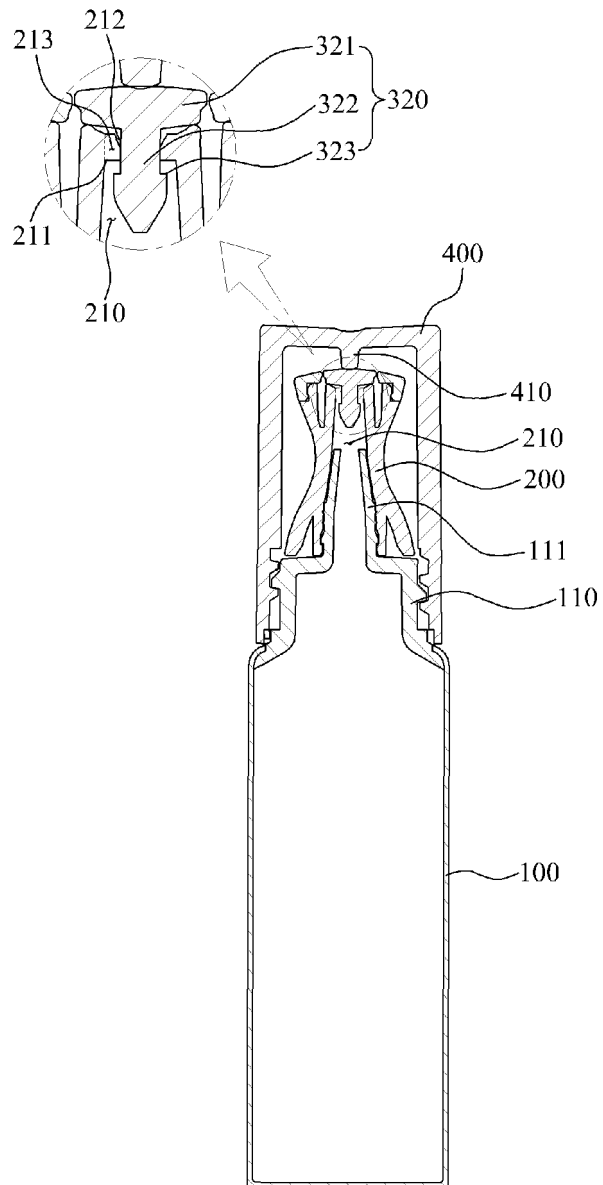
[Fig. 1]



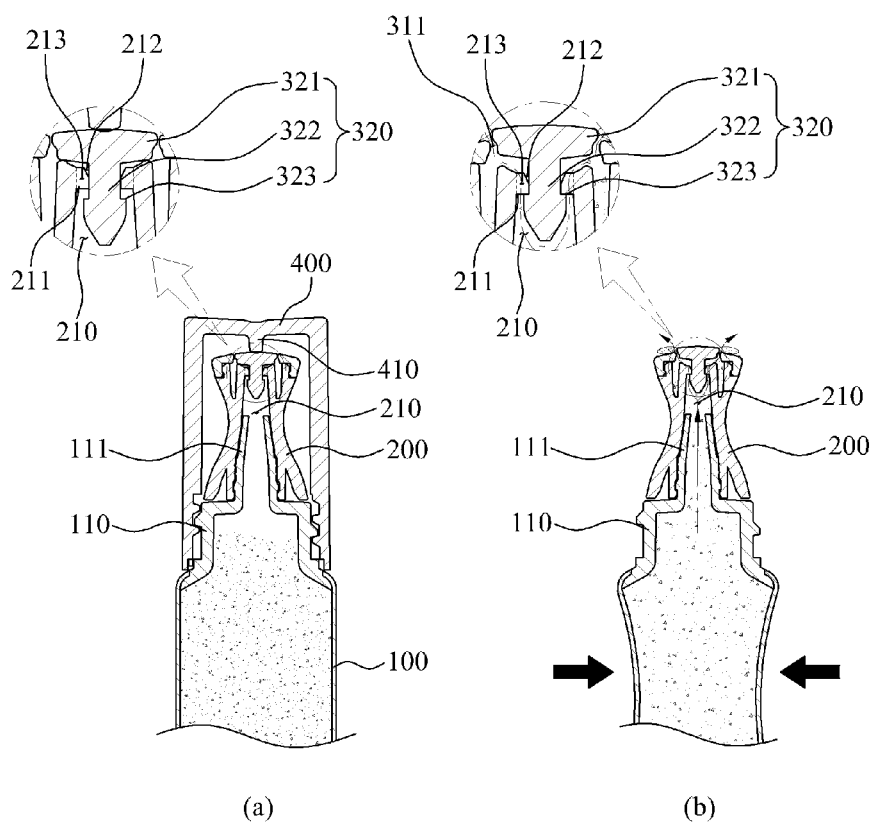
[Fig. 2]



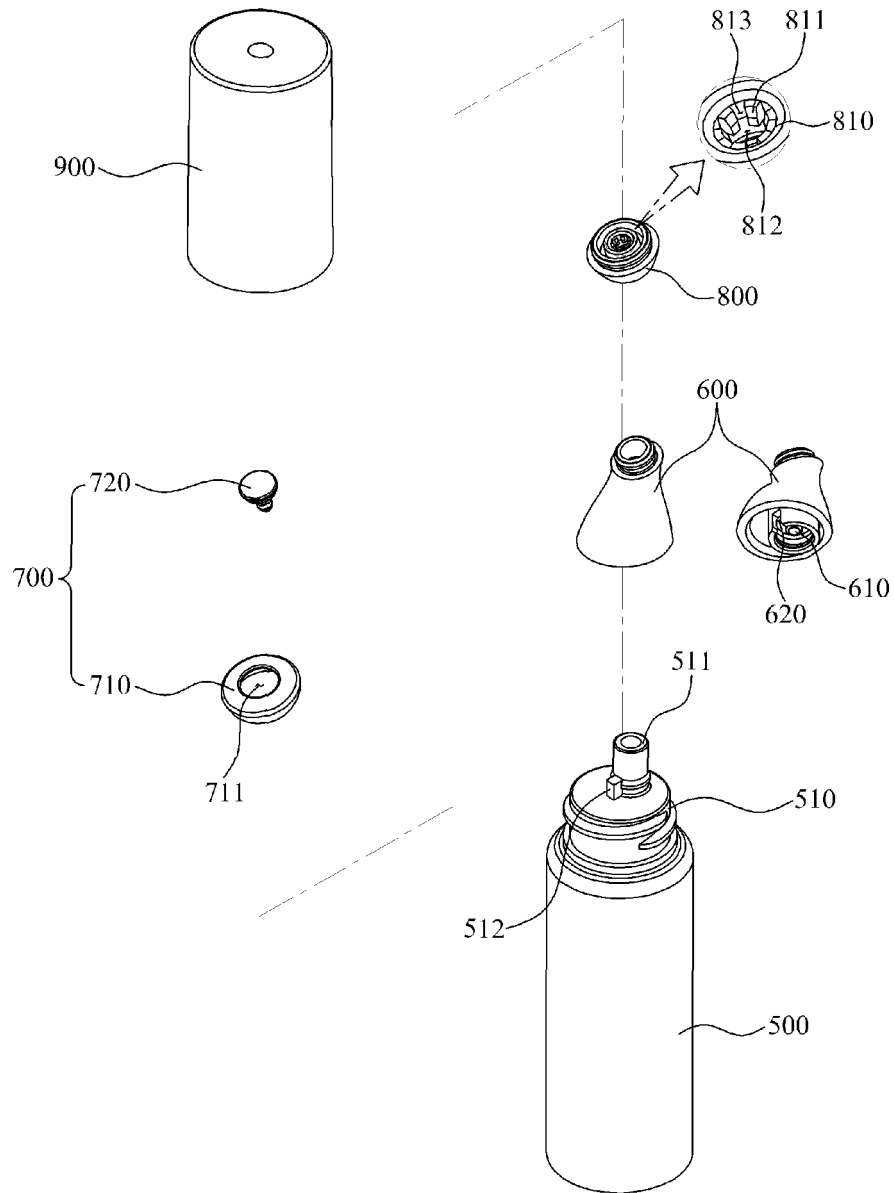
[Fig. 3]



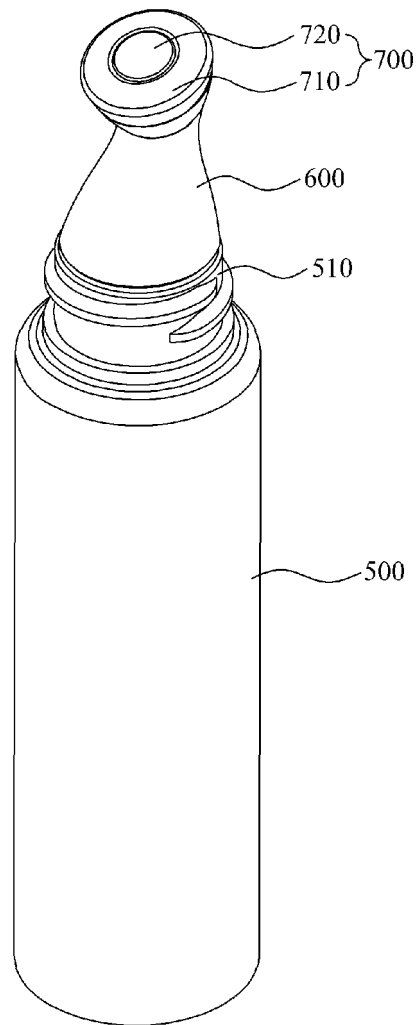
[Fig. 4]



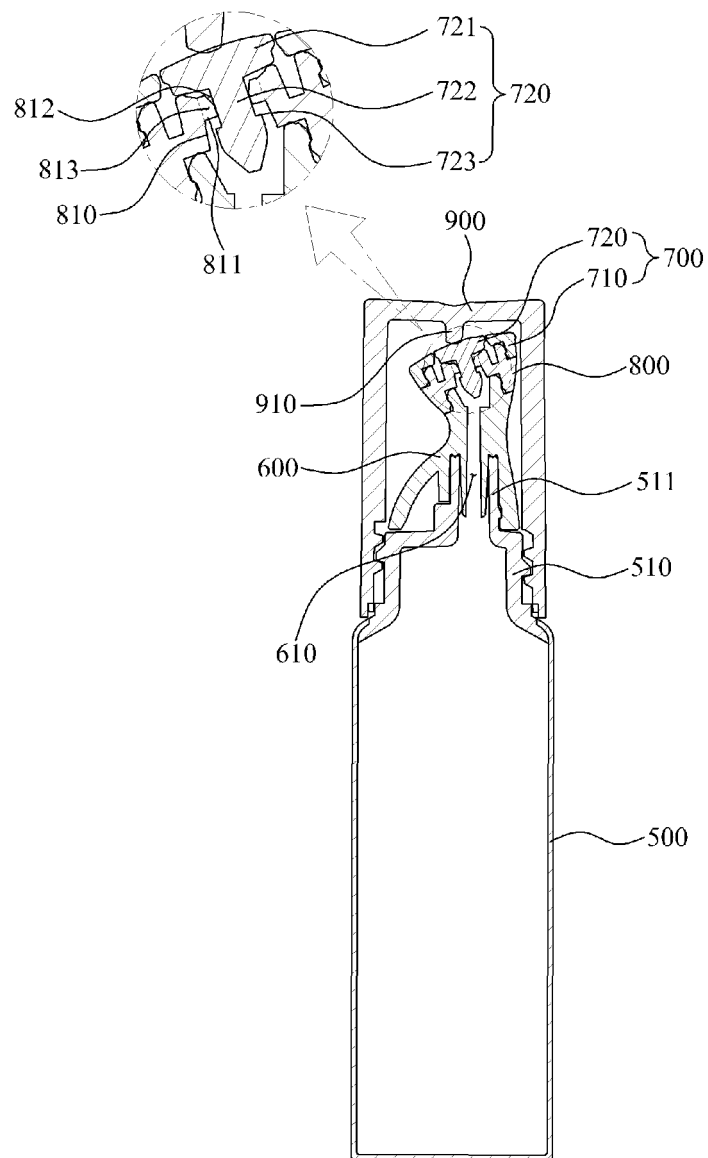
[Fig. 5]



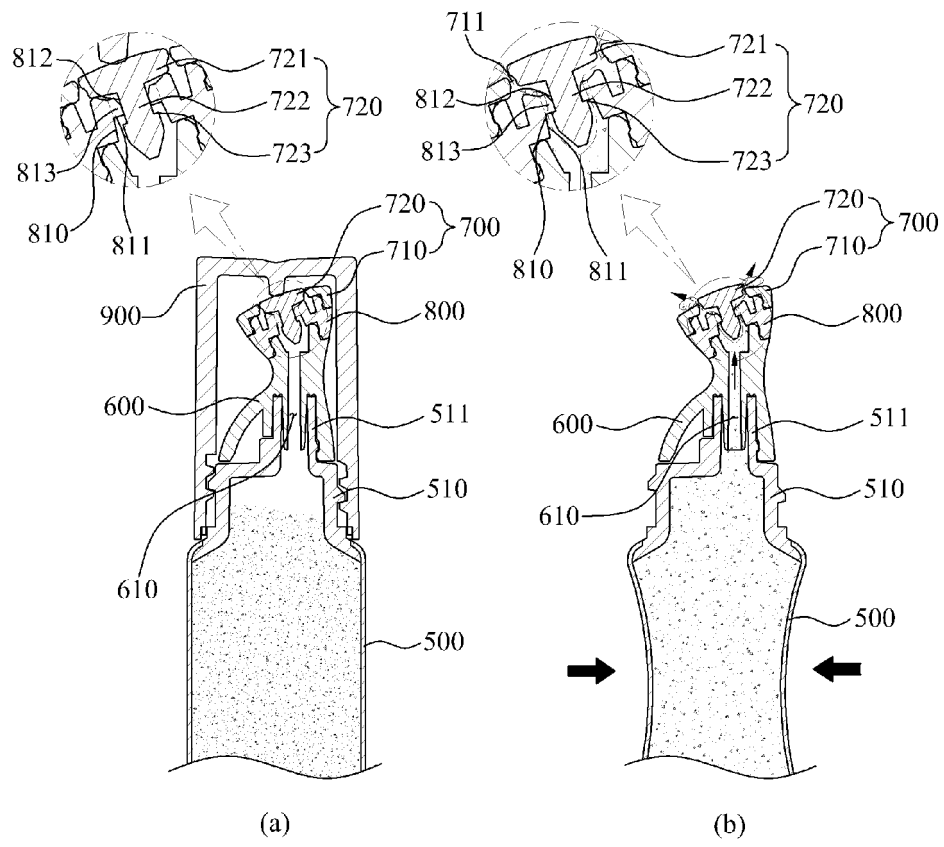
[Fig. 6]



[Fig. 7]



[Fig. 8]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2014/009257

A. CLASSIFICATION OF SUBJECT MATTER

A45D 40/26(2006.01)i, B65D 35/36(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A45D 40/26; A45D 40/02; A45D 34/00; A45D 34/04; A45D 40/04; B65D 35/36

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Utility models and applications for Utility models: IPC as above
Japanese Utility models and applications for Utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS (KIPO internal) & Keywords: cosmetic, content, discharge, tube, container, applicator, hallow

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-2013-0103870 A (YONWOO CO., LTD.) 25 September 2013 See abstract, paragraphs [0016]-[0047], claims 1-11, figures 1-6.	1-10
Y	WO 2012-102427 A1 (SHIN, Ki Bong et al.) 02 August 2012 See abstract, paragraphs [0031]-[0036], claim 1, figures 2-3.	1-10
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A		1-3,5-10
A	KR 10-2009-0021332 A (COSMOGEN) 03 March 2009 See abstract, paragraphs [0081]-[0086], claim 1, figure 1.	1-10

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:

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